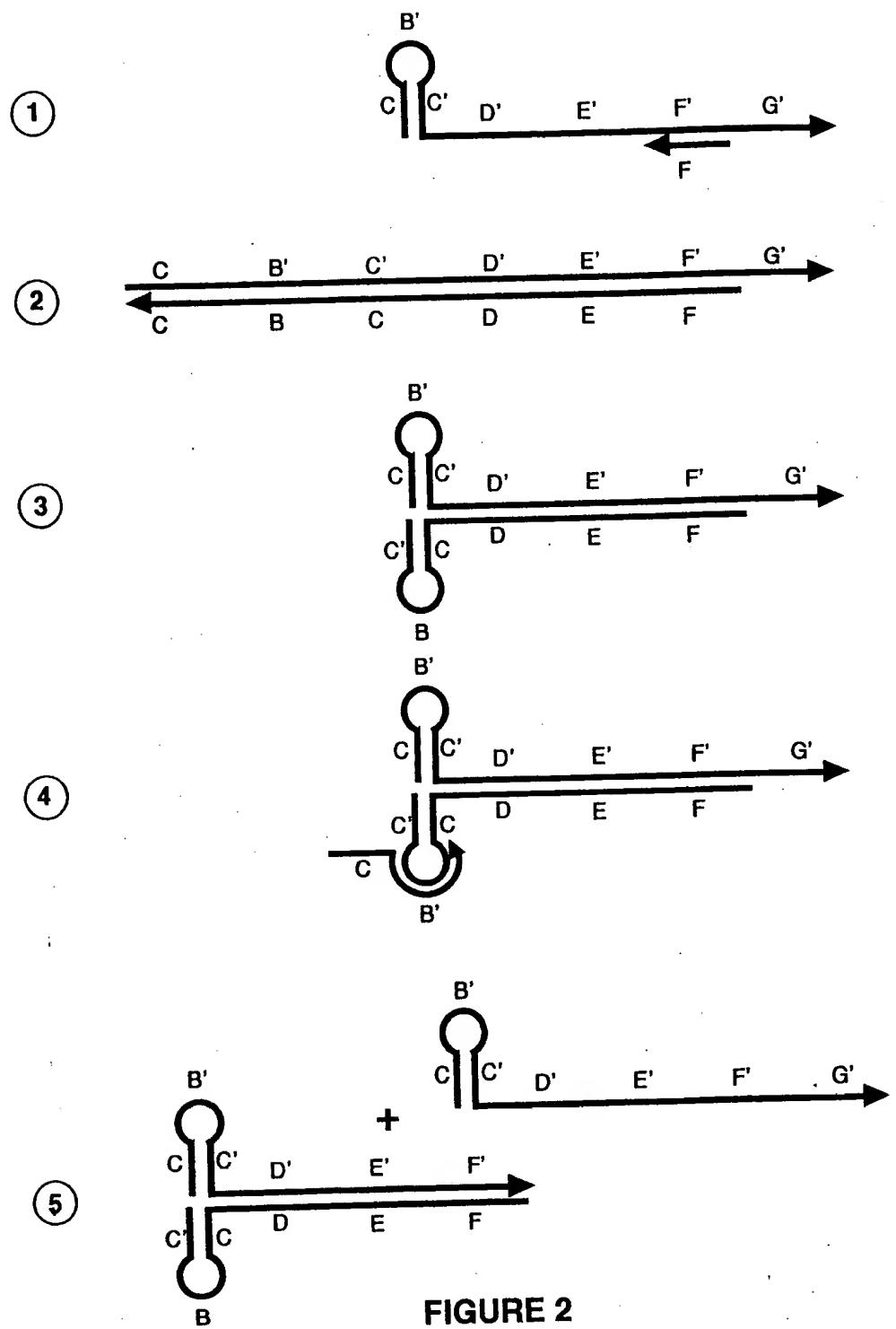
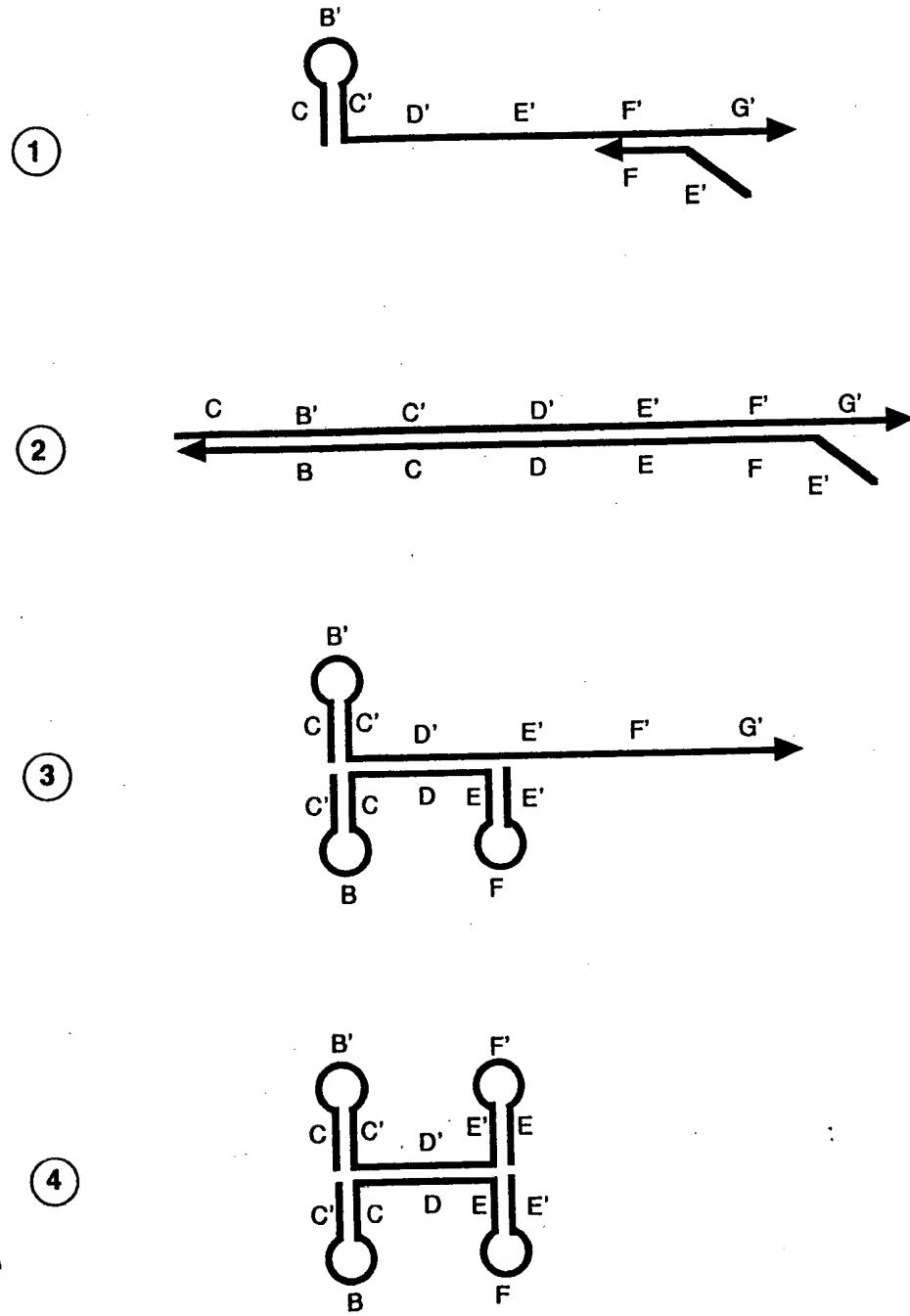


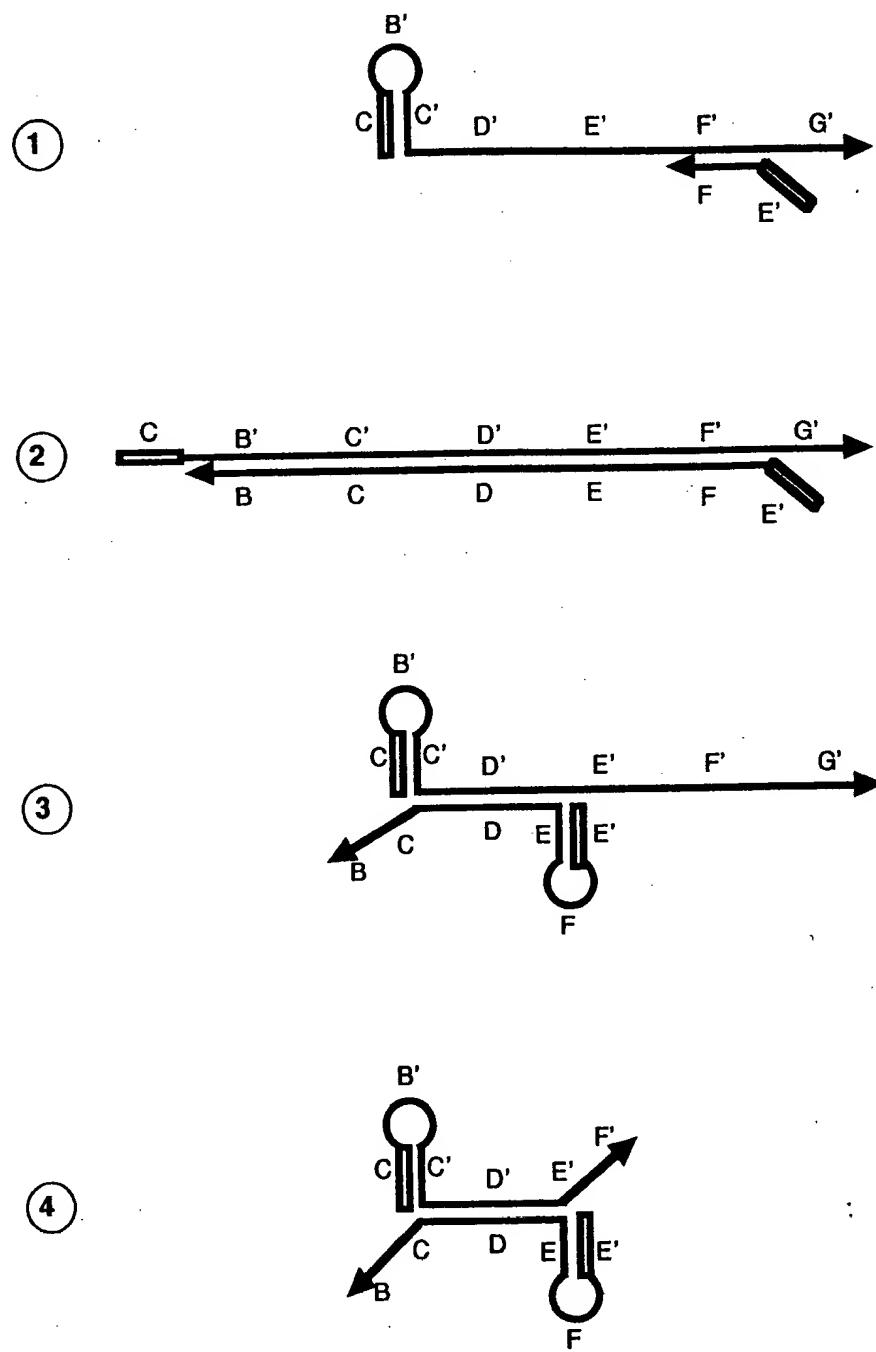
**FIGURE 1**



અનુભૂતિ કરી શકતું હોય

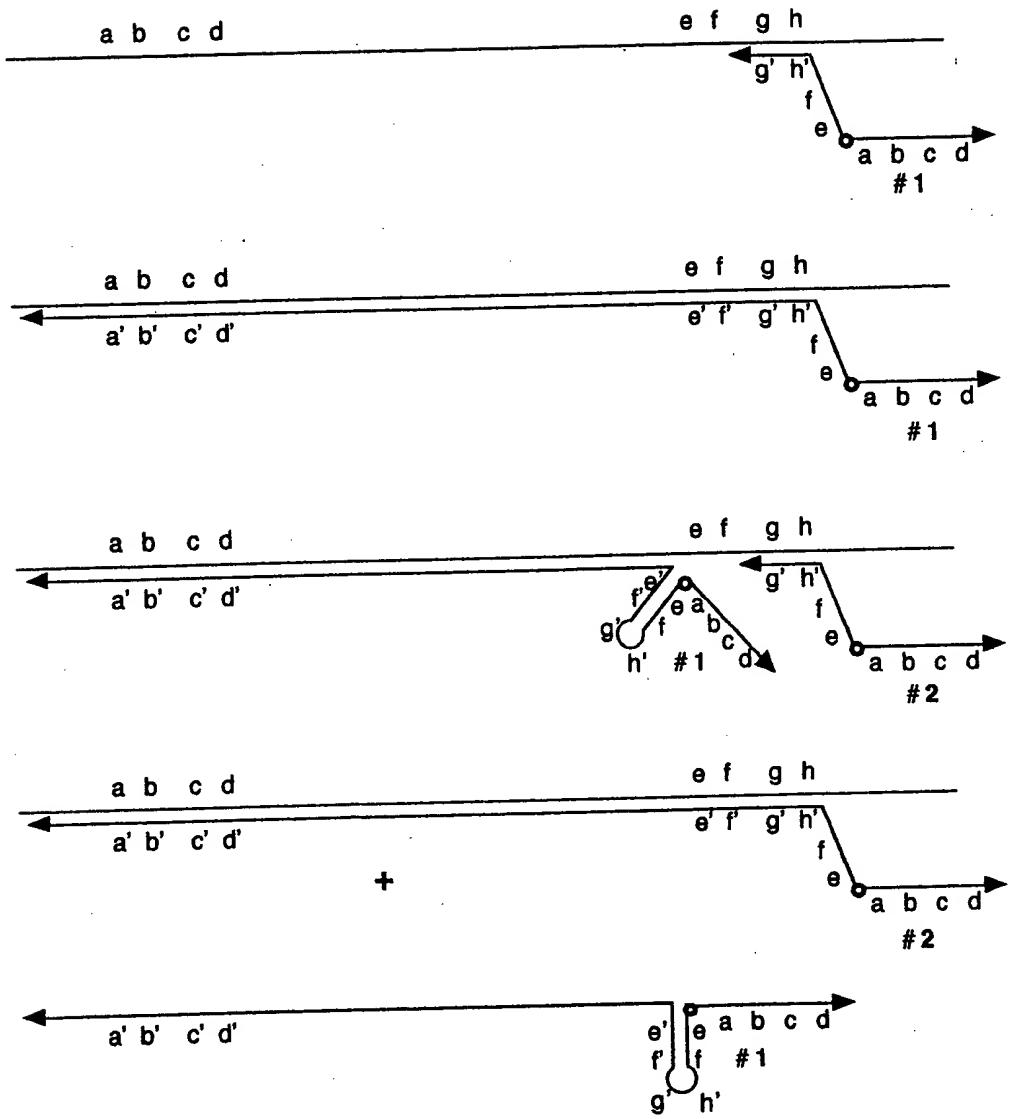


**FIGURE 3**

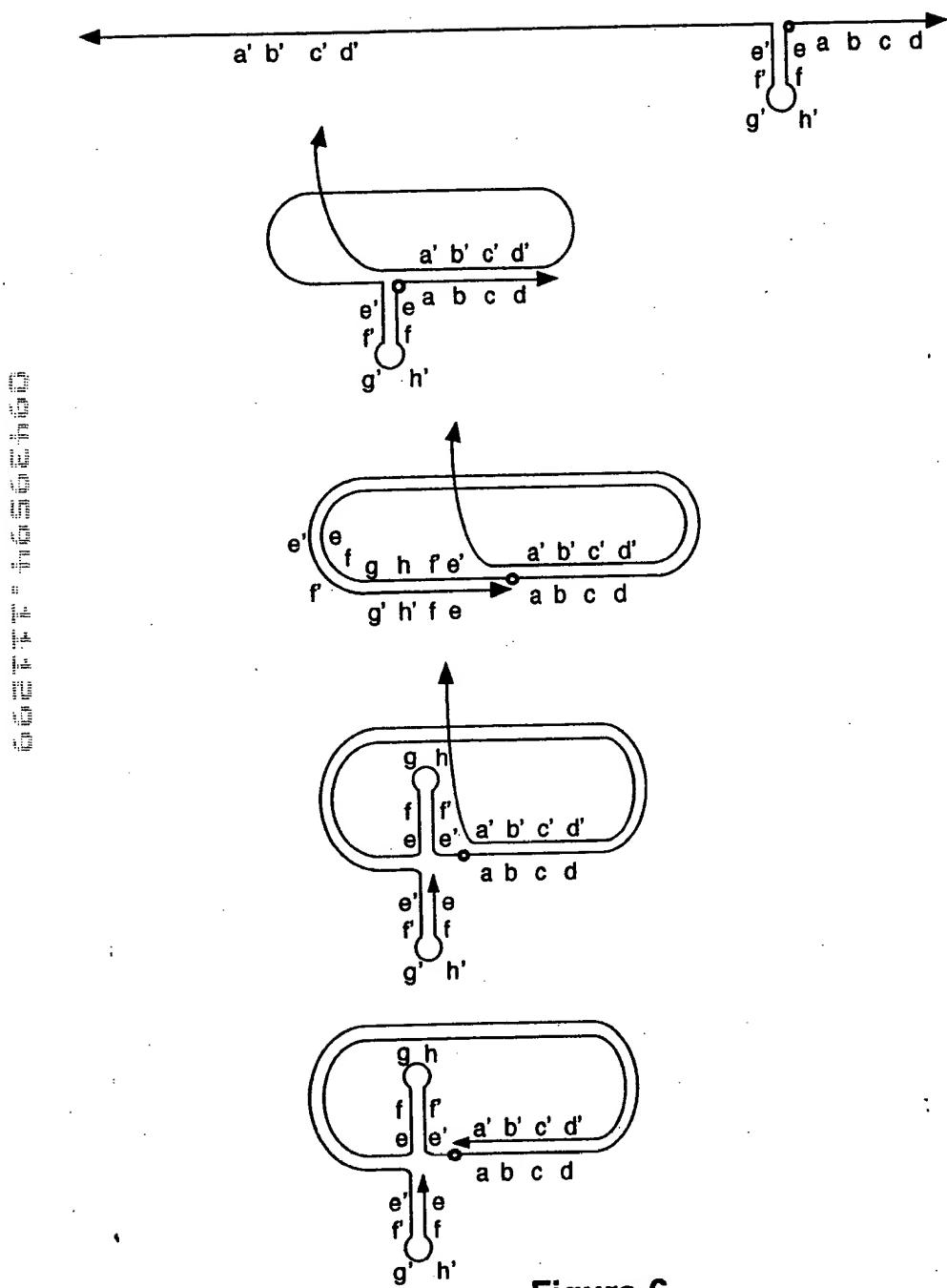


**FIGURE 4**

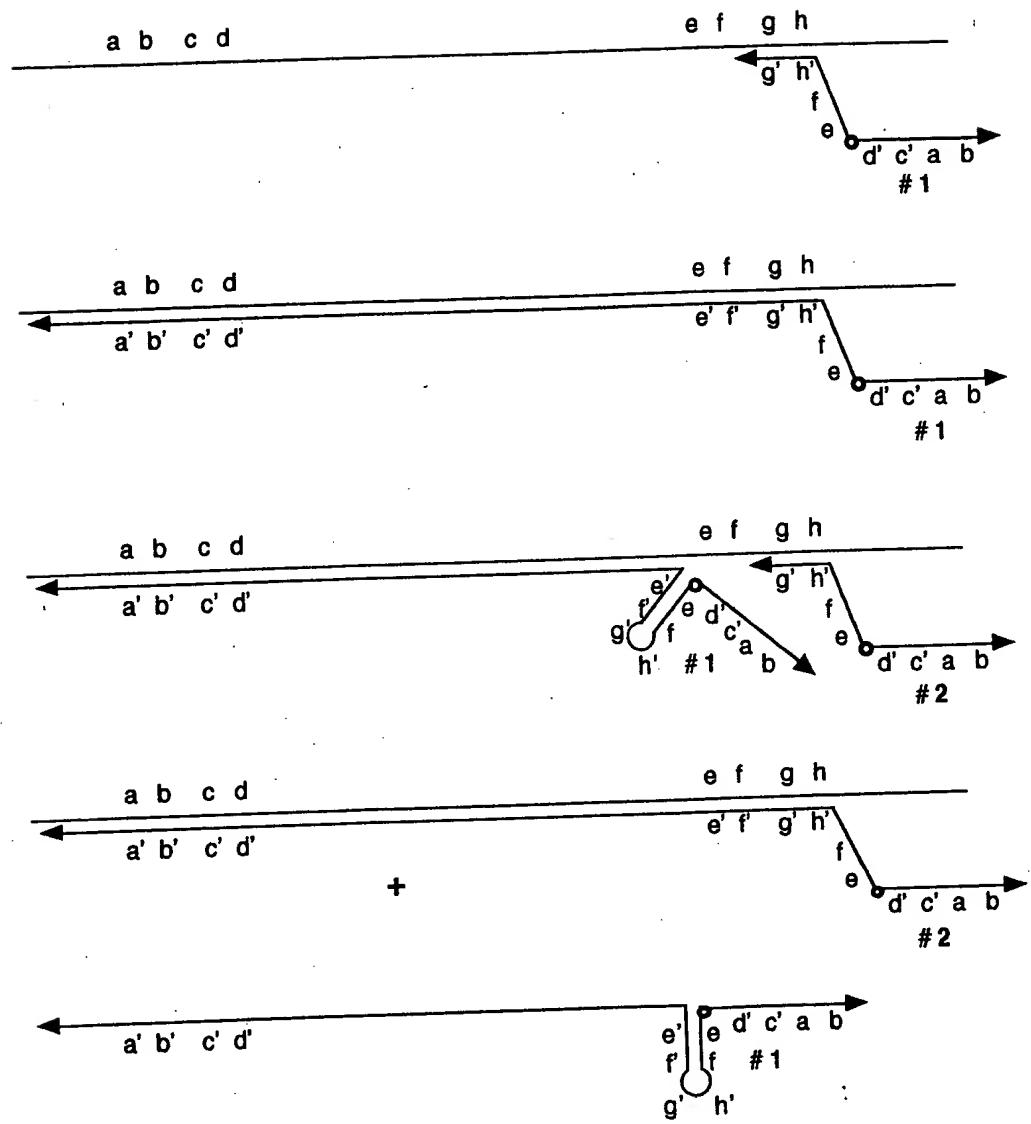
Figure 5 illustrates a sequence of diagrams showing the evolution of a configuration space over time.



**Figure 5**



**Figure 6**



**Figure 7**

குறிப்பு: கீழ்க்கண்ட வரைபடங்கள் தெரிவிக்கின்றன

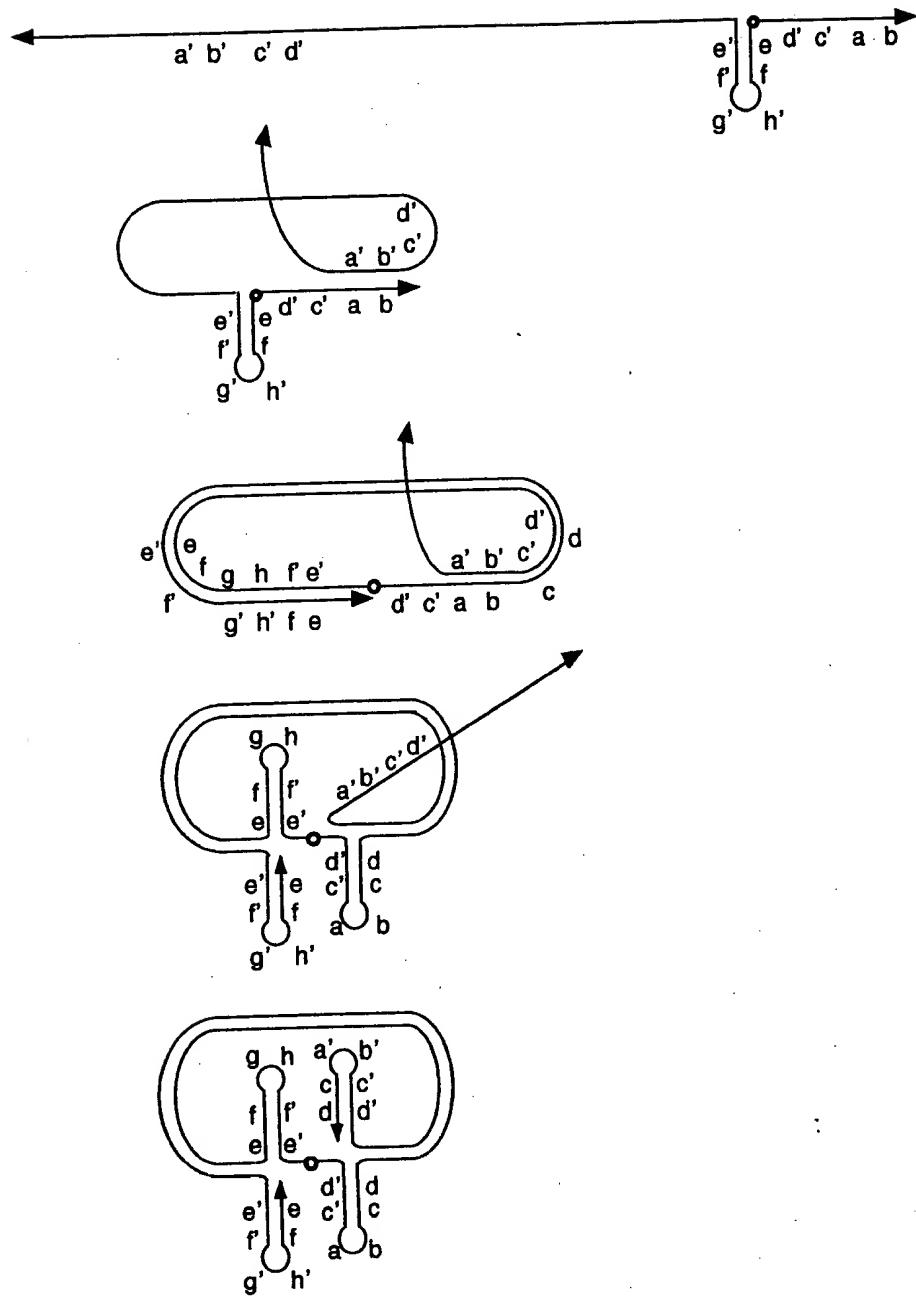
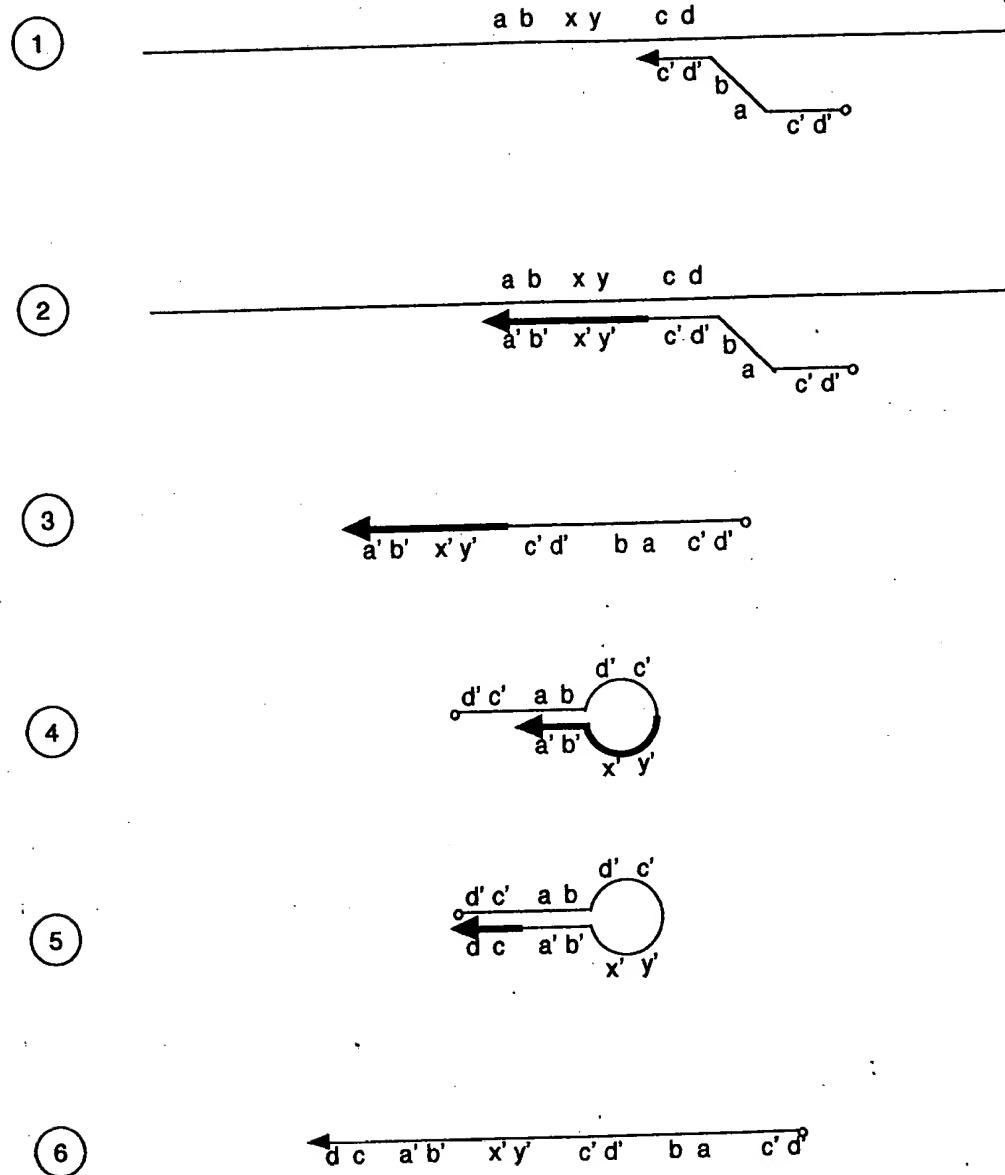
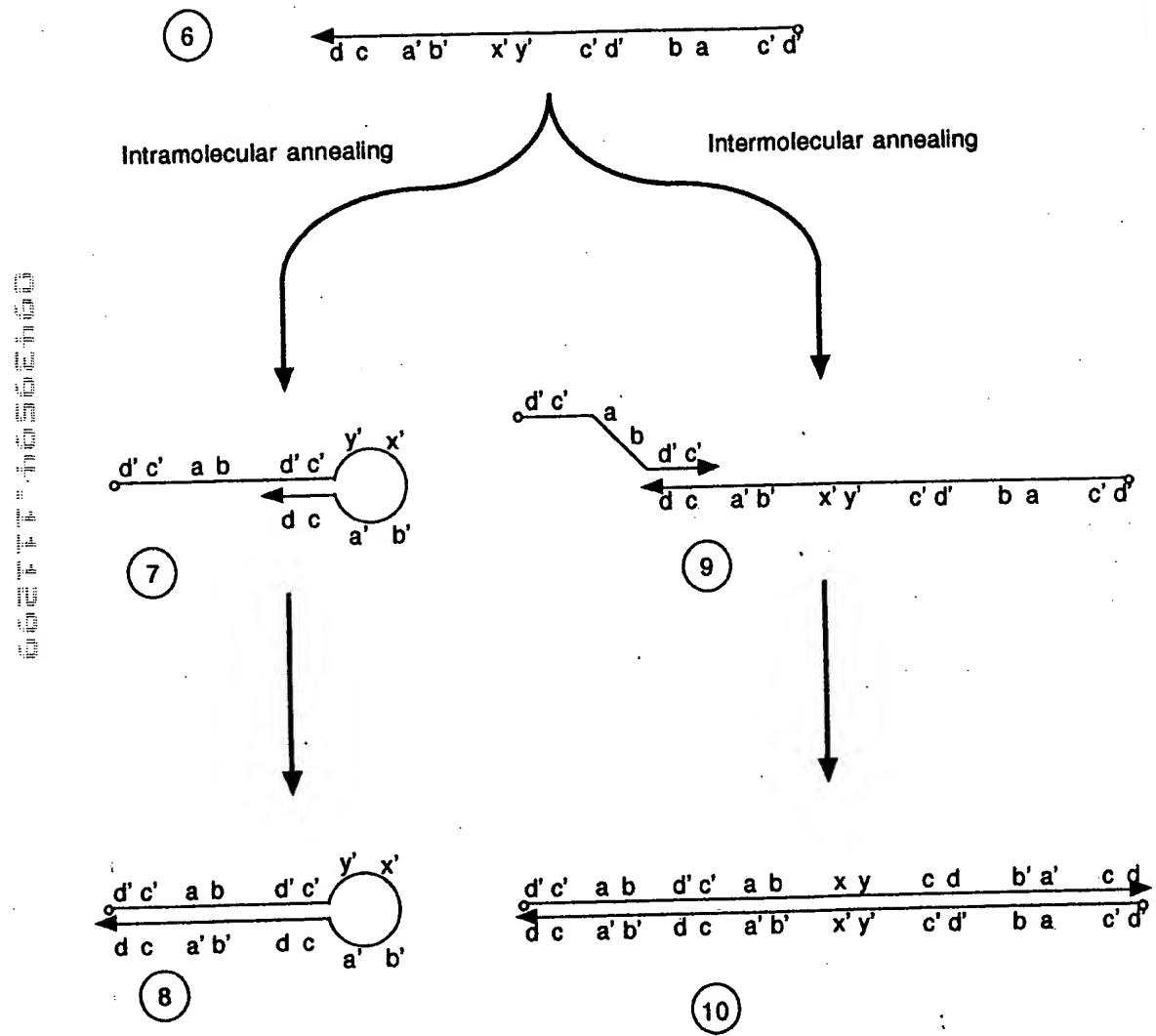


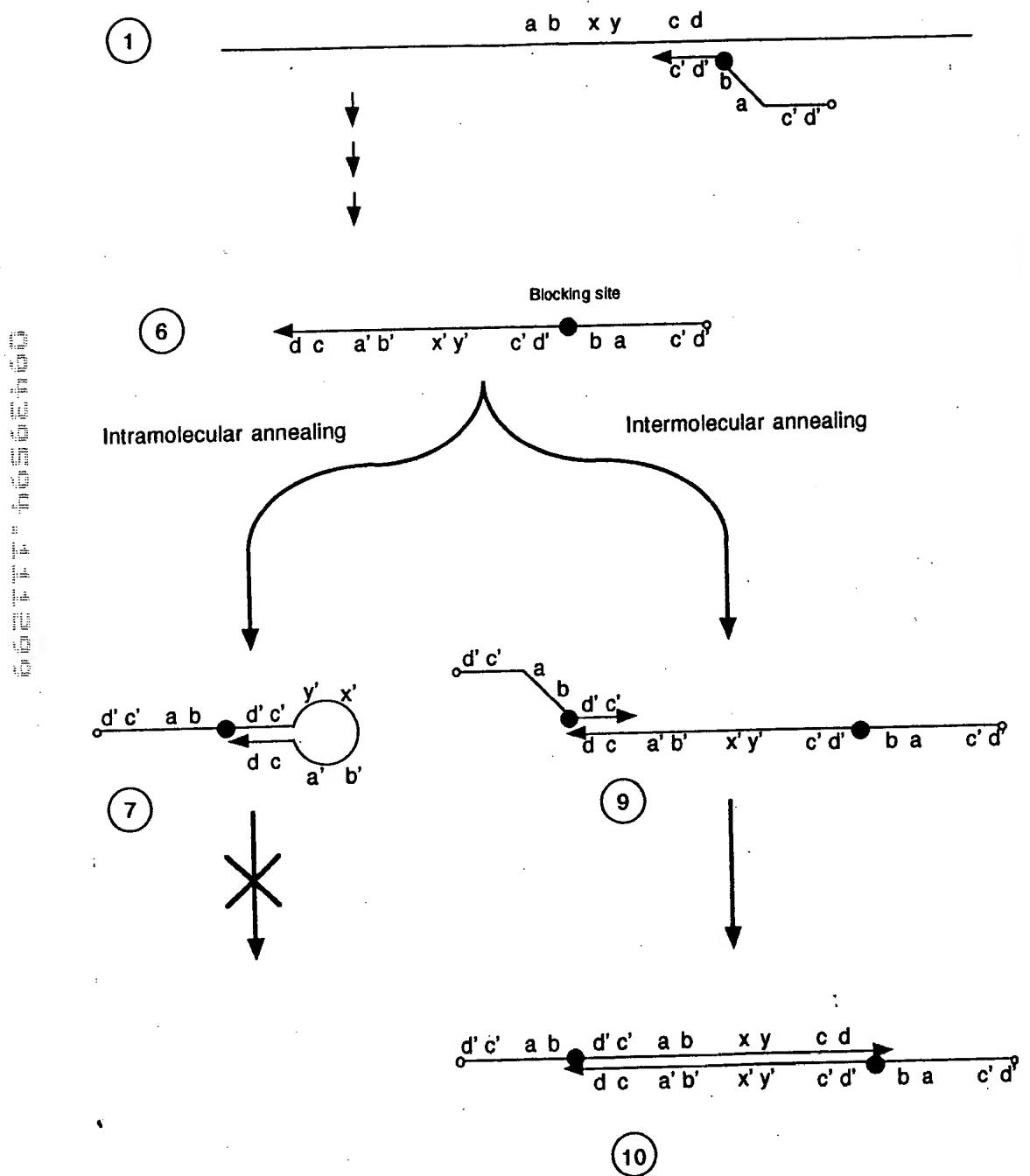
Figure 8



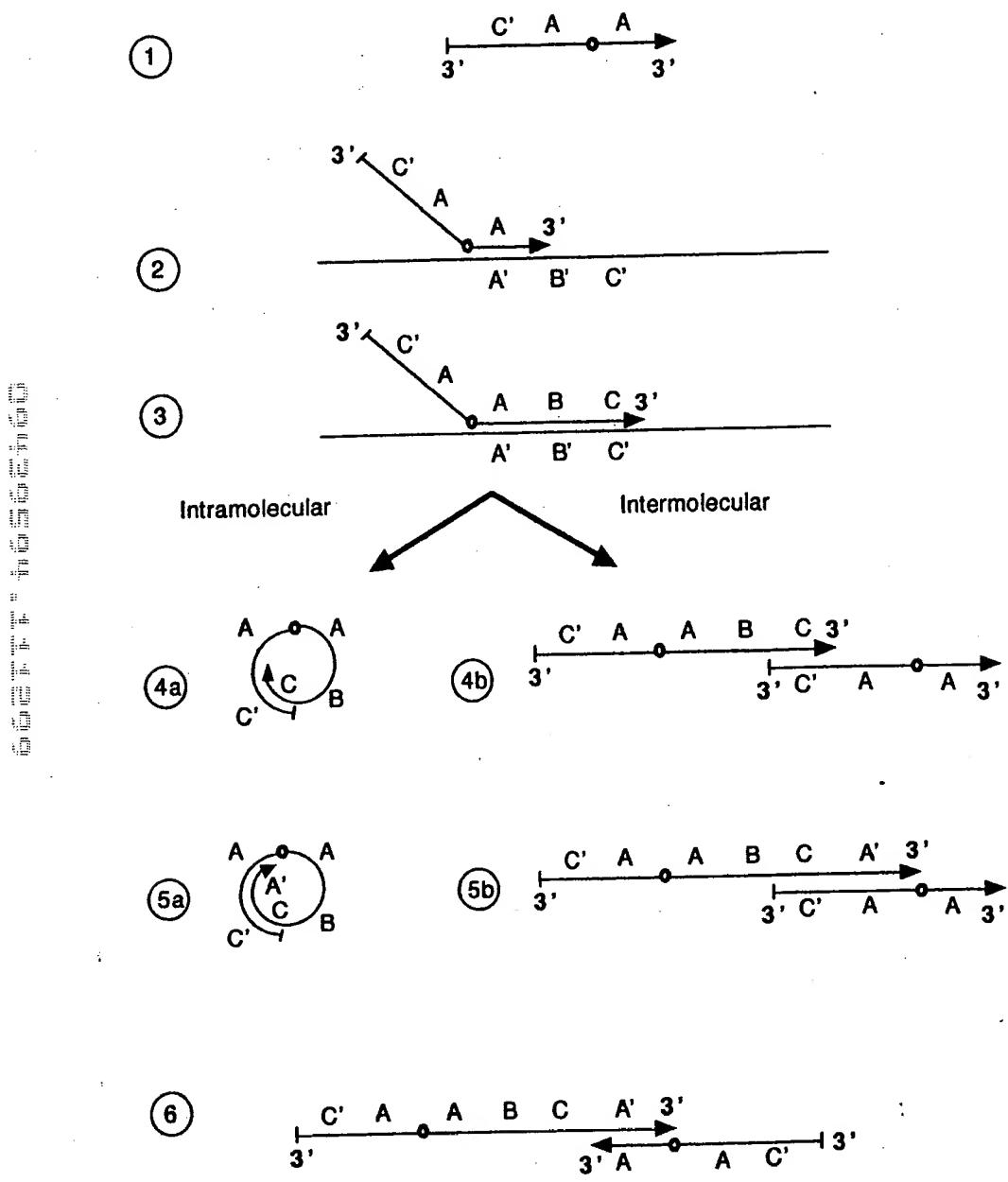
**FIGURE 9**



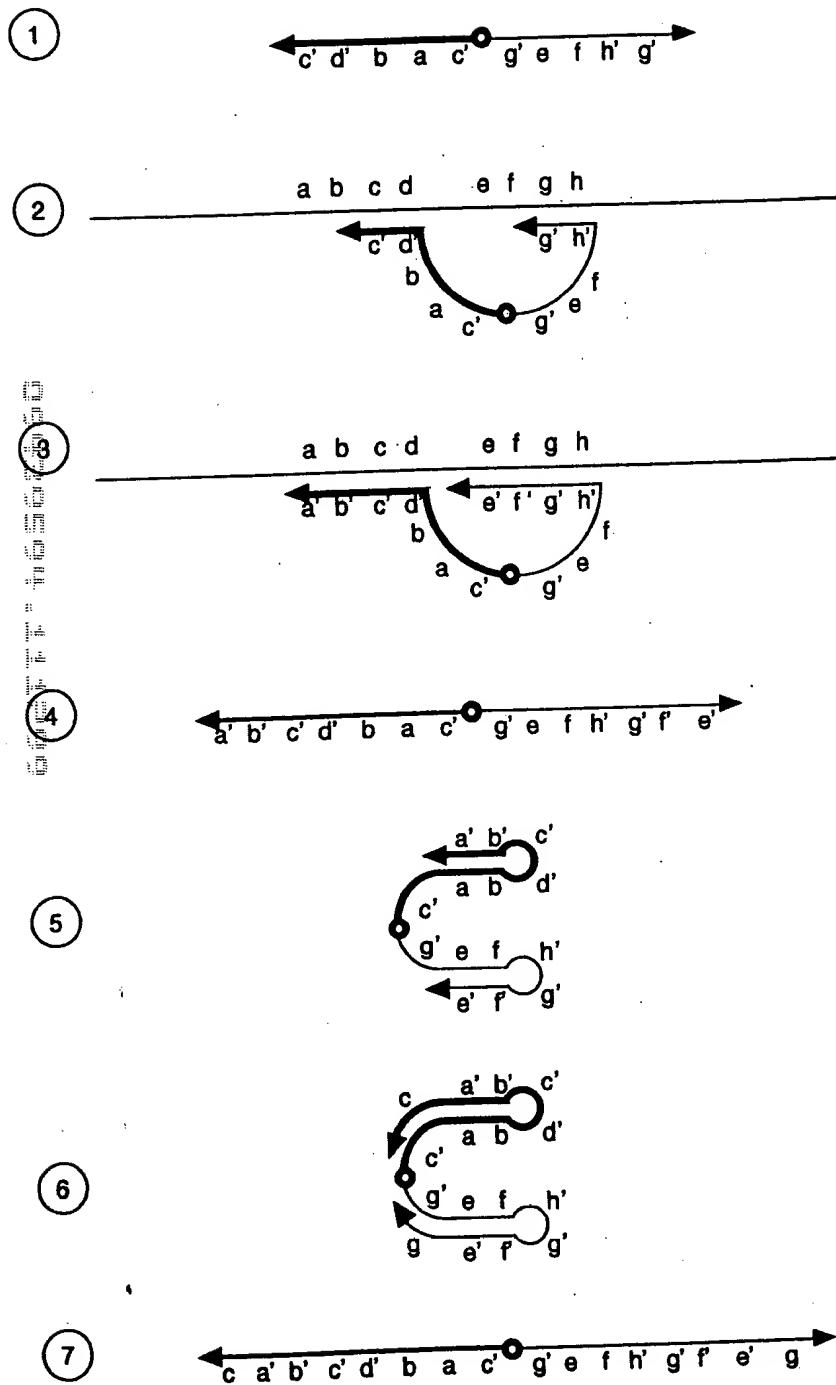
**FIGURE 10**



**FIGURE 11**

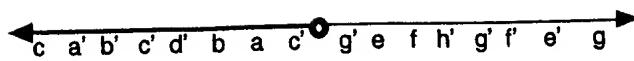


**FIGURE 12**

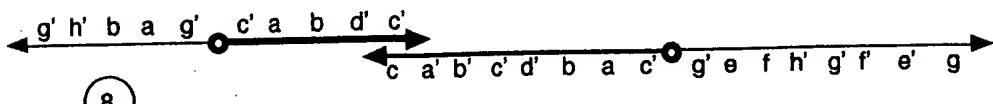


**FIGURE 13**

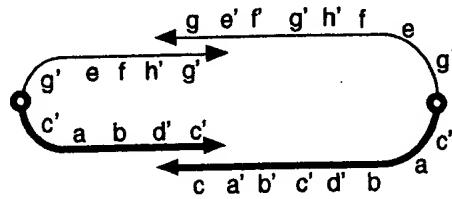
7



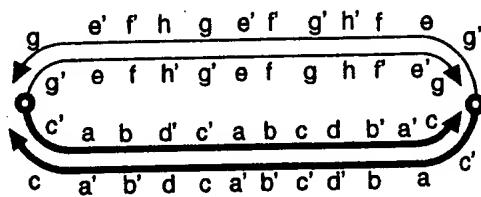
8



9



10



11

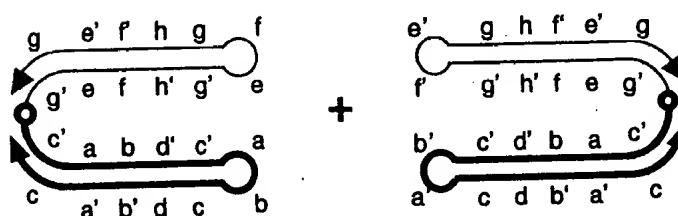
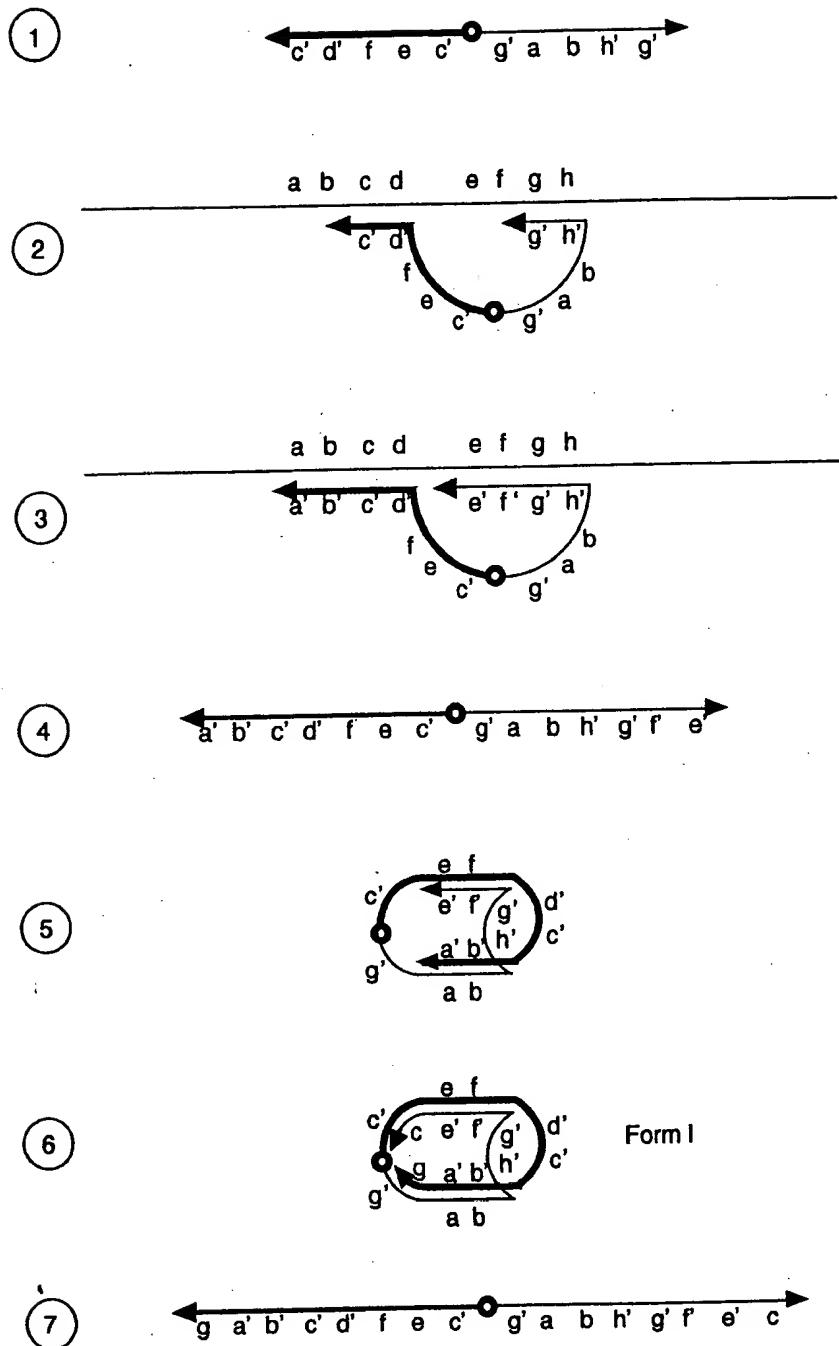
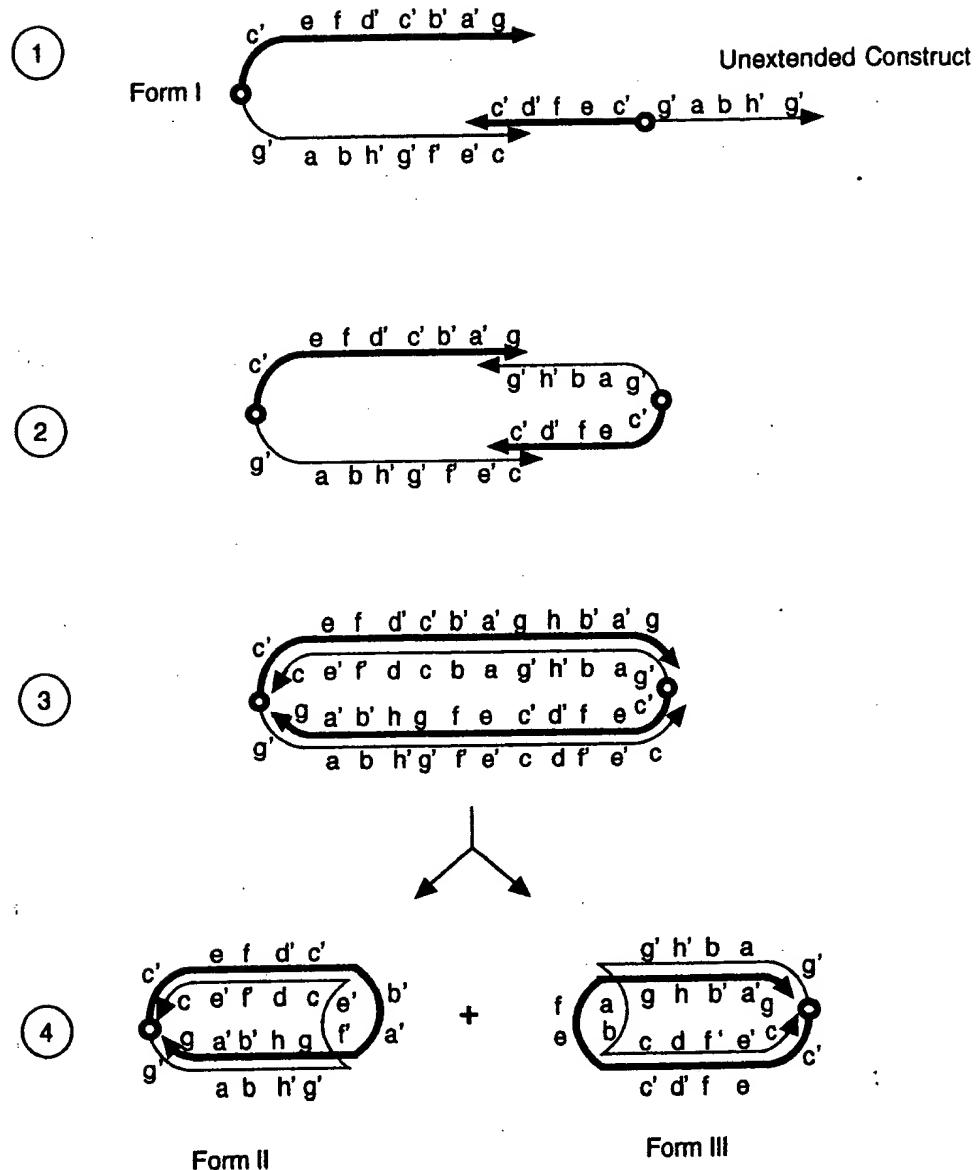


FIGURE 14



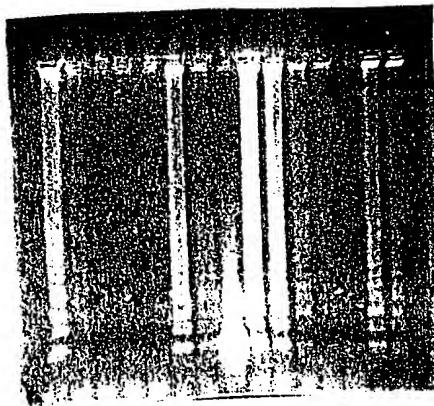
**FIGURE 15**



**FIGURE 16**

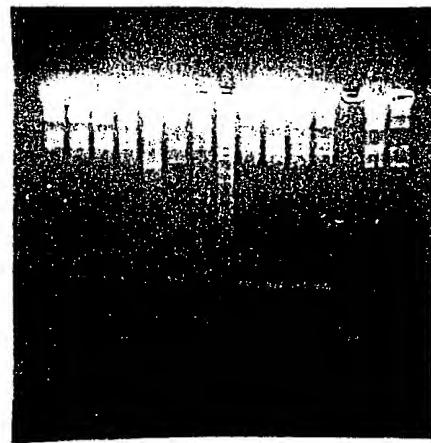
2004/05/04 14:42:00

A



30 Minutes Incubation

B



180 Minutes Incubation

- 1 53°C, 10<sup>-2</sup> dilution
- 2 53°C, 10<sup>-3</sup> dilution
- 3 53°C, 10<sup>-4</sup> dilution
- 4 53°C, 10<sup>-5</sup> dilution
- 5 53°C, No Target
- 6 53°C, 10<sup>-2</sup> dilution, FC/LRC
- 7 53°C, 10<sup>-2</sup> dilution, LFC/RC
- 8 Msp I Marker
- 9 63°C, 10<sup>-2</sup> dilution
- 10 63°C, 10<sup>-3</sup> dilution
- 11 63°C, 10<sup>-4</sup> dilution
- 12 63°C, 10<sup>-5</sup> dilution
- 13 63°C, No Target
- 14 63°C, 10<sup>-2</sup> dilution, FC/LRC
- 15 63°C, 10<sup>-2</sup> dilution, LFC/RC

FIGURE 17

### A) Gel assay

Top = Isothermal Amplification

Bottom = PCR Amplification

- 1 Msp I Marker
- 2  $1 \times 10^6$  target
- 3  $1 \times 10^4$  target
- 4  $1 \times 10^2$  target
- 5 No target

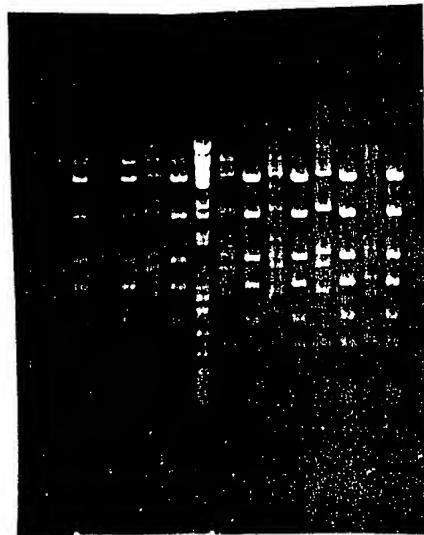


### B) Plate Assay

$10^6$ target	$10^4$ target	$10^2$ target	No target
1.702	1.594	0.376	0.085

FIGURE 18

1000 900 800 700 600 500 400 300 200 100

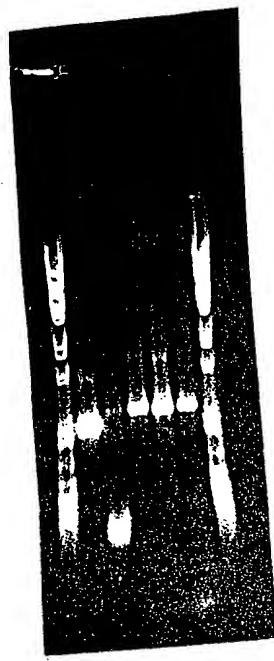


- 1 Carboxy-U, Klenow, 37°C, NEB #2
- 2 Normal T, Klenow, 37°C, NEB #2
- 3 Carboxy-U, Klenow, 37°C, Buffer #2A
- 4 Normal T, Klenow, 37°C, Buffer #2A
- 5 Carboxy-U, Klenow, 55°C, NEB #2
- 6 Normal T, Klenow, 55°C, NEB #2
- 7 Msp I Marker
- 8 Carboxy-U, Taq, 55°C, NEB #2
- 9 Normal T, Taq, 55°C, NEB #2
- 10 Carboxy-U, Taq, 65°C, Buffer #2M
- 11 Normal T, Taq, 65°C, Buffer #2M
- 12 Carboxy-U, Bst 65°C, Thermopol Buffer
- 13 Normal T, Bst, 65°C, Thermopol Buffer
- 14 Carboxy-U, Taq, 65°C, Buffer #2A
- 15 Normal T, Taq, 65°C, Buffer #2A

**FIGURE 19**

Enzyme	Buffer	Temperature	Nucleotide	Relative Level of Synthesis
Klenow	NEB #2	37°C	Carboxy U Normal T	++
Klenow	2A	37°C	Carboxy U Normal T	+++
Taq	NEB #2	55°C	Carboxy U Normal T	+
Taq	NEB #2	55°C	Carboxy U Normal T	++
Taq	2M	65°C	Carboxy U Normal T	++
Bst	ThermoPol	65°C	Carboxy U Normal T	++
Taq	2A	65°C	Carboxy U Normal T	+/-
				+++

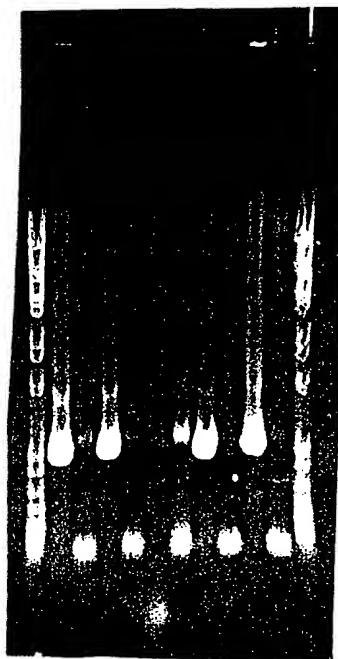
FIGURE 20



1. Msp I/Bst E II marker
2. Normal T, 1 mM  $MgCl_2$
3. Carboxy U, 2 mM  $MgCl_2$
4. Carboxy U, 3 mM  $MgCl_2$
5. Carboxy U, 4 mM  $MgCl_2$
6. Carboxy U, 5 mM  $MgCl_2$
7. Msp I/Bst E II marker

**FIGURE 21**

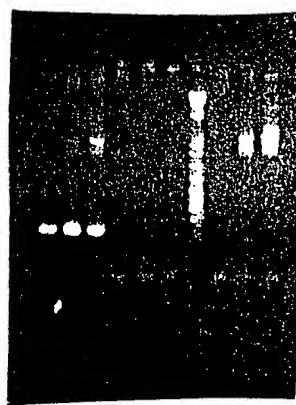
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1. Msp I/Bst E II marker
2. Normal T, Taq
3. Carboxy U, Taq
4. Normal T, TfI
5. Carboxy U, TfI
6. Normal T, Tth
7. Carboxy U, Tth
8. Normal T, Amplitherm
9. Carboxy U, Amplitherm
10. Normal T, Replitherm
11. Carboxy U, Replitherm
12. Msp I/Bst E II marker

**FIGURE 22**

1. Taq, 2mM MgCl<sub>2</sub>  
2. Taq, 4mM MgCl<sub>2</sub>  
3. Taq, 6mM MgCl<sub>2</sub>  
4. Tfl, 2mM MgCl<sub>2</sub>  
5. Tfl, 4mM MgCl<sub>2</sub>  
6. Tfl, 6mM MgCl<sub>2</sub>  
7. Msp I marker  
8. Tfl/Enh, 2mM MgCl<sub>2</sub>  
9. Tfl/Enh, 4mM MgCl<sub>2</sub>  
10. Tfl/Enh, 6mM MgCl<sub>2</sub>



**FIGURE 23**

Figure 24 shows a gel electrophoresis image with 11 lanes. Lanes 1 through 3 are labeled "Tth/Enh". Lanes 4 through 6 are labeled "Amplitherm/ Enh". Lanes 7 through 9 are labeled "Replitherm/ Enh". Lanes 10 and 11 are labeled "4mM MgCl<sub>2</sub>", "6mM MgCl<sub>2</sub>", and "8mM MgCl<sub>2</sub>". Lanes 4, 7, and 10 contain a marker.



1. Tth/Enh, 4mM MgCl<sub>2</sub>
2. Tth/Enh, 6mM MgCl<sub>2</sub>
3. Tth/Enh, 8mM MgCl<sub>2</sub>
4. Msp I/BspE1 marker
5. Amplitherm/ Enh, 4mM MgCl<sub>2</sub>
6. Amplitherm/ Enh, 6mM MgCl<sub>2</sub>
7. Amplitherm/ Enh, 8mM MgCl<sub>2</sub>
8. Msp I/BspE1 marker
9. Replitherm/ Enh, 4mM MgCl<sub>2</sub>
10. Replitherm/ Enh, 6mM MgCl<sub>2</sub>
11. Replitherm/ Enh, 8mM MgCl<sub>2</sub>

**FIGURE 24**



1. Msp I marker
2. 0.3X enhancer
3. Control
4. deaza G
5. Gene 32
6. 10% DMSO
7. 3X polymerase

**FIGURE 25**

5'-TGC GCT GCT AAC AAA GCC CGA AAG GAA G-----GCT GAA AGG AGG AAC TAT ATG GCG TCA TAC GAT ATG AAC GTT-3'  
3'-ACG CCA CCA TTT TTT CGG GCT TTC CTT C-----CGA CTT TCC TCC TTG ATA TAC GCG AGT ATG CTA TAC TTG CAA-5'

TS-13

5'-AAT CTA GA GCT AAC AAA GCC CGA AAG GAA G-3'

TS-14

3'-CGA CTT TCC TCC TTG ATA TA GAC GTC TT-5'

TS-21

5'-TGC GCT GCT AAC AAA GCC CGA AAG GAA G-3'

TS-23

3'-CGA CTT TCC TCC TTG ATA TAC GCG AGT-5'

TS-22

5'-ACC CGC GCT GCT AAC AAA GCC CGA AAG GAA G-3'

TS-24

3'-G ATA TAC GCG AGT ATG CTA TAC TTG CAA-5'

FIGURE 26

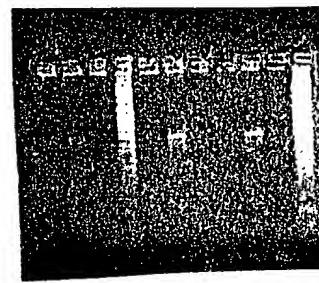
100 200 300 400 500 600 700 800 900 1000



1. Msp I marker
2. TS13 + TS14
3. TS13 + TS23
4. TS13 + TS24
5. TS21 + TS14
6. TS21 + TS23
7. TS21 + TS24
8. TS22 + TS14
9. TS22 + TS23
10. TS22 + TS24
11. Msp I marker
12. TS13 + TS14 (different lot of C-U)
13. TS13 + TS14 (allylamine dUTP)
14. TS13 + TS14 (normal dTTP)

**FIGURE 27**

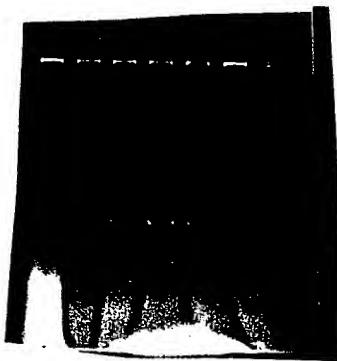
TS13 TS21 TS22 Msp I marker



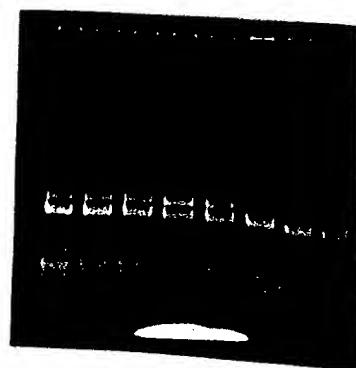
1. TS13 + TS14
2. TS13 + TS23
3. TS13 + TS24
4. Msp I marker
5. TS21 + TS14
6. TS21 + TS23
7. TS21 + TS24
8. TS22 + TS14
9. TS22 + TS23
10. TS22 + TS24
11. Msp I marker

**FIGURE 28**

**Fluorescent detection**



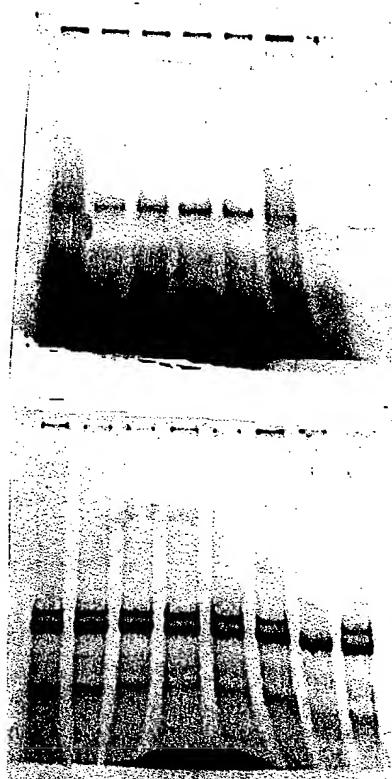
**Ethidium Bromide fluorescence**



1	1 x TAPS, pH 9.2
2	2 x TAPS, pH 9.2
3	3 x TAPS, pH 9.2
4	3 x TAPS, pH 9.7
5	3 x TAPS, pH 9.2
6	3 x TAPS, pH 8.6
7	No enzyme control
8	Fluorescein 12-ddUTP control

**FIGURE 29**

**Fluorescent detection**



**Ethidium Bromide fluorescence**

1	1 x TAPS, pH 9.2
2	2 x TAPS, pH 9.2
3	3 x TAPS, pH 9.2
4	3 x TAPS, pH 9.7
5	3 x TAPS, pH 9.2
6	3 x TAPS, pH 8.6
7	No enzyme control
8	Fluorescein 12-ddUTP control

**FIGURE 30**